UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,663	03/08/2000	Richard Taylor	1509-106	2149

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EXAMINER
POON, KING Y

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/521,663	TAYLOR ET AL.
	Examiner	Art Unit	
	King Y. Poon	2624	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2005 and 29 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-65* is/are pending in the application.

 4a) Of the above claim(s) *See Continuation Sheet* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,35,38,39,44,45,50,52,53,56,59-61 and 63* is/are rejected.

7)☒ Claim(s) *59* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☒ All b)☐ Some * c)☐ None of:

 1.☒ Certified copies of the priority documents have been received.

 2.☐ Certified copies of the priority documents have been received in Application No. _____.

 3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 17-34,36,37,40-43,46-49,51,54,55,57,58,62,64 and 65.

DETAILED ACTION

1.   Applicant's election with traverse of the restriction requirement in the reply filed

on 8/15/2005 is acknowledged. The traversal is on the ground(s) that a) the examiner

could have make the restriction requirement before applicant filing the RCE or before

mailing the final rejection, b) there was no serious burden. This is not found persuasive

because: a) MPEP 811 states that "This means the examiner should make a proper

requirement as early as POSSIBLE in the prosecution, in the first action if possible...".

This application is examined by Examiner Poon after the RCE has been filed and

after the final rejected has been mailed. Therefore, the earliest possible time for the

examiner (Poon) to make a proper restriction requirement is after applicant has filed the

RCE and after mailing the final rejection.

b) as point out by the examiner in the restriction requirement, the best reference

for invention III should be located in class 358/1.15, the best reference for invention IIII

should be located in class 708, subclass 100, and the best reference for invention IIIII

should be located in class 347, subclass 111. Therefore, the search for invention III is

completed by locating the best reference would require further search for the other two

invention and vice versa. Therefore, it presents serious burden for the examiner (Poon)

if the restriction requirement is not being made.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-4, 6, 7, 9, 35, 38, 39, 44, 45, 50, 56 are rejected under 35 U.S.C. 102(b)

as being anticipated by Gerlach (5,469,532).

Regarding claim 1, Gerlach discloses a method of the printing of a job from a

computer with a printer, the printer having a printer processor (col. 5 lines 3-8), the

method comprising: the computer generates instruction, data that causes the printer to

print the plural pages of document (col. 8 lines 27-45 and col. 9 lines 8-13, fig. 3A-3C);

the computer generates resource information indicative of printer processor resources

required by the printer to print a current page (e.g., page 1, fig. 3A-C) and subsequent

pages (e.g., page 2, 3, fig. 3A-3C) of the document; sending the instruction data (data of

the document file, column 11,lines 5-10) and resource information required to print the

current page and the subsequent pages from computer to printer (col. 8 lines 27-45 and

col. 9 lines 8-13, fig. 3A-3C also shows the resource information is located with the

document file with the first/current page) with the current page (column 11, lines 5-15,

the document file and the resource must be given to the printer before the printer can

start printing; the printer does not need all the file, but must have at least the current

page that is to be printed (inherent)). Gerlach further discloses that the use of the

printer processor's resources, sent with the current page (note) is scheduled for printing

the current page and subsequent pages (column 13, lines 55-65) of the document (col.

8 lines 50-57 and col. 11 lines 24-25). Gerlach further discloses that the job is printed

with resources used as scheduled (col. 9 lines 12-13).

Regarding claim 2: Gerlach discloses that instruction data is provided as at least

one of page description language (PDL) and job control language (JCL) (e.g., RPLs,

column 10, lines 15-20, column 14, lines 5-10; document file data inherently are job

control language because it controls how the print job is to be printed).

Regarding claim 3: Gerlach discloses that resource information can be provided

as an annotation to the PDL and/or JCL, in Gerlach's device resources required for

printing are gathered and placed into a resource store together with the RPL data

(render primitives list), which are formed from PDL data (col. 10 lines 29-33). Also see

fig. 3A-3C)

Further, after resource information is generated, the resource information is

annotated to the instruction data (col. 10 lines 29-33, fig. 3A-3C).

Regarding claim 4, Gerlach discloses that a common information processing

structure carry out the steps of generating instruction data and resource information and

then annotating the instruction data with the resource information (col. 10 lines 28-33).

In Gerlach's system the device is called a resource assembler, it converts PDL data to

RPL data and adds resources for transmission to printer (col. 10 lines 28-33).

In accordance with claim 6, Gerlach discloses that a first information processing

structure carry out the step of generating the instruction data. In Gerlach's system, the

application program performs this task by generating PDL data (col. 9 lines 66-67).

Gerlach further discloses that a second information processing structure carry out the step of generating the resource information and annotating the instruction data with the resource information.

In Gerlach's system, the resource assembly performs this task by gathering required resources and generating RPL data from PDL data and sending RPL data along with resources to the printer (col. 10 lines 28-33).

Regarding claim 7: Gerlach discloses that the second information structure (the resource assembler; col. 10 lines 28-33) be located in an information path for instruction data from the first information processing (the application program, col. 9 line 67) structure to the printer (figure 2, where resource assembler 208 is between application program 204 and printer 226). Further, since the second information processing structure takes the output of the first information processing structure as input, and the printer engine takes as input the output of the second information processing structure, it would be obvious to a person of ordinary skill in the art that the second information processing structure must lie in between the first information processing structure and the printer engine (A outputs to B, which outputs to C; therefore B must be in between A and C).

Regarding claim 9: Gerlach discloses that a discrete structure, receives instruction data as input, in Gerlach's system the resource assembler receives instruction data in the form of PDL data from the application program, and outputs instruction data with resource information (col. 10 lines 28-33). In Gerlach's system

instruction data in the form of RPL data is output from the resource assembler along

with resources required for printing (col. 10 lines 28-33).

Regarding claim 35: Gerlach discloses a computer system with a printer adapted

to print a plurality of pages (fig. 3A-3C) of a document from instruction data and

resource information (col. 10 lines 28-33 and col. 9 lines 8-13).

The printer has a processor, which is arranged to schedule its resources for

printing the different plural pages of the document from the instruction data and

resource information (col. 8 lines 63-67). Then, to print the document from the

instruction data with the printer resources as scheduled (col. 9 lines 8-13). A computer

is programmed to provide a job for printing. The computer has a first information

processing structure to generate instruction data to enable a printer to print the job,

which is the application program in Gerlach's system (col. 9 lines 66-67). It further has a

second information processing structure to generate resource information indicative of

resource requirements of the printer to print the current page and subsequent pages of

the document (fig. 3A-3C, column 13,lines 35-60), which is the resource assembler in

Gerlach's system (col. 8 lines 39-45). The computer has an information path to send

instruction data (data of the document file, column 11,lines 5-10) and resource

information form the computer to the printer (figure 2, data can be sent from resource

assembler 208 or resource loader 214 in the computer to the resource scheduler 216 or

printer resource store 220 in the printer) for causing the printer to print the current page

and subsequent pages; and a communication path for sending the information about

printing the current page with the subsequent pages from computer to printer (figure 2,.

data can be sent from resource assembler 208 or resource loader 214 in the computer

to the resource scheduler 216 or printer resource store 220 in the printer, also see

column 11, lines 5-10).

Regarding claims 38, 39: Claim 1 disclosed all of the limitations of claim 38

except wherein the scheduling step includes changing the order of operation of related

to the printer printing a document segment/page. Please see discussion of claim 1.

Gerlach further teaches scheduling step includes changing the order of operation

of related to the printer printing a document segment/page (column 13, lines 35-62, fig.

3A-3C).

Note: the different stages of printing the document is being interpreted as printing

different pages.

Regarding claims 44, 45: Claim 35 disclosed all of the limitations of claim 44

except the printer processor being arranged such that the scheduled resources enable

a change in the order of operation of related to the printer printing a document

segment/page. Please see discussion of claim 35.

Gerlach further teaches the printer processor being arranged such that the

scheduled resources enable a change in the order of operation of related to the printer

printing a document segment/page (column 13, lines 35-62, fig. 3A-3C).

Note: the different stages of printing the document is being interpreted as printing

different pages.

Regarding claim 50: Gerlach teaches wherein the scheduling step includes scheduling the printing of later pages prior to the execution of tasks related to the printing of earlier pages (column13, lines 55-60).

Regarding claim 56: Claims 1 disclosed the limitations of claim 56.

Gerlach further teaches wherein the instruction data is provided as at least one of page description language and job control language (file data of column 11, lines 5-10, is at least a job control language because it controls how to print, also see RPL, column 14, lines 5-10), and the resource information is provided as annotation to the file (fig. 3A-3C), and wherein the method comprises, after the step of generating resource information, the step of annotating the instruction data with resource information (inherently, resource information cannot be added to the file before the existence of the resource information).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Snipp (US 5,699,495).

Regarding claim 5: Gerlach discloses all the limitations of claim 4, from which claim 5 depends.

Gerlach further discloses that the structure that performs the operations of the common information processing structure must lie in between the application program, which originally generates PDL data and the printer, to which instruction data and resource information will ultimately be sent (col. 9 line 66 - col. 10 line 33). Gerlach does not disclose expressly that the common information processing structure be the printer driver.

Snipp discloses that the printer driver lies between the application program and the print device (figure 2., where application program 26 connects to print device 14 through print driver 388) to provide device driver instructions for the printer.

Gerlach and Snipp are combinable because they are from the same field of endeavor. At the time of invention it would have been obvious to a person of ordinary skill in the art to use the print driver of Snipp to perform the functions of the resource assembler taught by Gerlach (col. 10 lines 28-33), because it would provide a single focal point for instructions for document printing.

Regarding claim 8: Gerlach discloses all the limitations of claim 7, from which claim 8 depends.

Gerlach further discloses that the structure that performs the operations of the second information processing structure must lie in between the application program, which originally generates PDL data and the printer, to which instruction data and resource information will ultimately be sent (col. 9 line 66 - col. 10 line 33).

Gerlach does not disclose expressly that the second information processing structure be the printer spooler.

Snipp discloses that the printer spooler lies between the application program and

the print device (figure 2, where application program 26 connects to print device 14

through print spooler 35).

Gerlach and Snipp are combinable because they are from the same field of

endeavor. At the time of invention it would have been obvious to a person of ordinary

skill in the ad to use a print spooler taught by Snipp for the resource assembler taught

by Gerlach (col. 10 lines 28-33), because it would provide for more flexible and complex

print scheduling.

6.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach

in view of Motoyama (5,319,748).

Regarding claim 10: Gerlach discloses all the limitations found in claim 3 from

which claim 10 depends.

Gerlach does not disclose expressly that the instruction data and resource

information be specified in the form of comments, and that prior to sending data to the

printer, the comments are filtered to extract resource information.

Motoyama discloses using comments to distinguish "various resources" (col. 2,

line 39).

Gerlach and Motoyama are combinable because they are from the same field of

endeavor. At the time of invention it would have been obvious to a person of ordinary

skill in the art that the resource information could be placed in comments with the

instruction data.

The motivation of Gerlach's system is to get the resource information to the printer prior to printing, so the allocation of resources can be planned and printing is not slowed (col. 11 lines 12-15 and col. 16 lines 25-27).

Since Gerlach's system is communicating resource information, and it is known from Motoyama (col. 2 line 39) that resource information is provided in comments, it would be obvious to use the comments as a means of sending resource information to the printer because it would greatly simplify resource information communication.

Although Gerlach does not disclose filtering comments for resource information, he does disclose filtering the PDL data to determine what resources are required (col. 10 lines 29-31). Since Motoyama discloses that PDL data may contain resource information in comments it would be obvious that the combination of Gerlach's system with Motoyama's would provide filtering of comments.

7.   Claims 11-15, 52, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Motoyama in further view of Siegel (5.678,133) and Motoyama (EP 0 538 059).

With respect to claims 11-13, Gerlach and Motoyama, do not disclose expressly where the comments are located in the headers PDL or JCL when they are sent to the printer. Siegel discloses that "page properties" are embedded in the PDL header, which is sent to the printer (col. 6 lines 55-57).

Motoyama (EP) discloses that resource information can be posted at "the beginning of each distinct document segment" (abstract lines 6-8).

Gerlach and Motoyama and Siegel and Motoyama (EP) are combinable because they are from the same field of endeavor.

At the time of invention, it would have been obvious to a person of ordinary skill in the ad to send resource information from the computer to the printer in the form of comments in the PDL, as Motoyama describes, and to have the information located in a header of the PDL, as described by Siegel.

The motivation for doing so would have been to get resource information to the printer prior to transmitting data to be printed as the header gets to the printer first.

All the resource information can be sent in one header at the beginning of the PDL as described by Siegel (col. 6 lines 55-57) or resource information could be sent at the "beginning of each distinct document segment" as described in Motoyama (EP) (abstract lines 6-8).

Therefore, it would have been obvious to combine Siegel with Gerlach and Motoyama and Motoyama (EP) to obtain the invention as specified in claims 11-13.

Regarding claims 14-15: Claims 14-15 are rejected as obvious for analogous reasons. Claim 14 further specifies the page headers contain resource information only for the page to which they relate or to pages later in the job if their information has not already been provided. It would be obvious to a person of ordinary skill in the art that page headers not contain information regarding pages that have already printed or that are not to be printed as this extraneous data would simply slow down the process without adding anything of value.

Claim 15 further specifies a method where no resource information is provided as a comment to the page header of the first page. In other words the first page is printed in the conventional manner and the remaining job is printed in the manner described above and rejected as obvious.

At the time of invention, it would have been obvious to a person of ordinary skill in the art, to send data relating to the first page of the job to the printer as soon as it is ready and then continue generating resource information for the remainder of the job, because doing so allows the printer to begin printing immediately instead of waiting for resource information to be generated.

Regarding claim 52: Please see discussion of claim 11-13 and the claims they depend on.

Gerlach teaches the resource information must be presented and learn by the printer first to prevent printer stall (column 11, lines 10-15, column 13, lines 55-60, column 5).

Regarding claim 53: Gerlach discloses using a PDL (col. 10 lines 29-31).

8.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Motoyama in further view of Siegel and Motoyama (EP).

Gerlach, Motoyama, Siegel and Motoyama (EP) combine to disclose all the limitations of claim 15, from which claim 16 depends.

Gerlach further discloses that computer data can be translated into a bit-map data file (col. 1 lines 16-17). The data file is sent to the printer and into the print engine,

which controls the printing process by handling the use of the printer's resources (col. 1

lines 20-26). Therefore, Gerlach discloses that for printing in this manner, no resource

information is generated prior to the data arriving at the printer; instead the print engine

handles the use of the resources.

Gerlach is combinable with Motoyama, Siegel and Motoyama (EP) for reasons

already given above.

9.   Claims 60, 61, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gerlach.

Regarding claim 60: Gerlach teaches the resource information (e.g., pointer of

fig. 3B) is added incrementally to the current page (page 2, fig. 3A) and to the

subsequent pages (page 3, fig. 3B) as the subsequent pages become available, and the

pages are passed to the printer as soon as the printer can handle the pages (note)

There is not reason to passed the pages to the printer if the printer cannot handle

the pages and the pointer can not be added to the pages if the pages is not available.

Therefore it would have been obvious to a person with ordinary skill in the art at

the time the invention was made to: added resource information as the subsequent

pages become available, and the pages are passed to the printer as soon as the printer

can handle the pages.

Regarding claim 61: Gerlach teaches wherein no resource is provided on the

first page of the document (fig. 3B) the resource information (e.g., pointer of fig. 3B) is

added incrementally subsequent pages (page 2, fig. 3B) as the subsequent pages

become available, and the pages are passed to the printer as soon as the printer can

handle the pages (note)

There is not reason to pass the pages to the printer if the printer cannot handle

the pages and the pointer cannot be added to the pages if the pages is not available.

Therefore it would have been obvious to a person with ordinary skill in the art at

the time the invention was made to: added resource information as the subsequent

pages become available, and the pages are passed to the printer as soon as the printer

can handle the pages.

Regarding claim 63: Gerlach teaches wherein no resource is provided on the

first page of the document (i.e., the first page his not analyzed for resource information,

fig. 3B) the resource information (e.g., pointer of fig. 3B) is added incrementally

subsequent pages (page 2, fig. 3B) as the subsequent pages become available, and the

pages are passed to the printer as soon as the printer can handle the pages (note)

There is not reason to pass the pages to the printer if the printer cannot handle

the pages and the pointer cannot be added to the pages if the pages is not available.

Therefore it would have been obvious to a person with ordinary skill in the art at

the time the invention was made to: added resource information as the subsequent

pages become available, and the pages are passed to the printer as soon as the printer

can handle the pages.

Allowable Subject Matter

10.   Claim 59 is objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims.

Response to Arguments

11.   Applicant's arguments filed 11/29/2004 have been fully considered but they are

not persuasive.

With respect to applicant's argument that Gerlach does not teach resource

information is annotated to the instruction data/job control language, has been

considered.

In reply: the file, column 11, lines 5-10, that controls the printer to print is

inherently written in job control language because it is a language that the printer can

understand and is used in controlling a print job. Column 10, lines 20-45 teaches

resource information is presented at the file as explaining information (annotated) to the

printer of what type of resource is required at what page.

With respect to applicant that the cited references does not teach the change the

order of operation of task related to the printer printing a document segment, has been

considered.

In reply: Column 25, lines 55-65, teaches the sequence (order) of processing the

printing task of printing different pages.

With respect to applicant's argument that the cited references does not teach the provide resource information as command in PDL located in page headers for enabling the printer processor to learn, in advance of reeiving pages of a job, how the printer resources are to be scheduled to prevent printer stall; has been considered.

In reply: Gerlach and Motoyama, do not disclose expressly where the comments are located in the headers PDL or JCL when they are sent to the printer. Siegel discloses that "page properties" are embedded in the PDL header, which is sent to the printer (col. 6 lines 55-57).

Motoyama (EP) discloses that resource information can be posted at "the beginning of each distinct document segment" (abstract lines 6-8).

Gerlach and Motoyama and Siegel and Motoyama (EP) are combinable because they are from the same field of endeavor.

At the time of invention, it would have been obvious to a person of ordinary skill in the ad to send resource information from the computer to the printer in the form of comments in the PDL, as Motoyama describes, and to have the information located in a header of the PDL, as described by Siegel.

The motivation for doing so would have been to get resource information to the printer prior to transmitting data to be printed as the header gets to the printer first.

All the resource information can be sent in one header at the beginning of the PDL as described by Siegel (col. 6 lines 55-57) or resource information could be sent at the "beginning of each distinct document segment" as described in Motoyama (EP) (abstract lines 6-8).

Therefore, it would have been obvious to combine Siegel with Gerlach and

Motoyama and Motoyama (EP) to obtain the invention as specified in claims 11-13.

Gerlach further teaches the resource information must be presented and learn by

the printer first to prevent printer stall (column 11, lines 10-15, column 13, lines 55-60,

column 5).

Conclusion

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to King Y. Poon whose telephone number is 571-272-

7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on 571-272-7437. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

October 29, 2005

KING Y. POON
PRIMARY EXAMINER